

# MONTHLY WEATHER REVIEW.

(GENERAL WEATHER SERVICE OF THE UNITED STATES.)

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WAR DEPARTMENT,  
OFFICE OF THE CHIEF SIGNAL OFFICER,

DIVISION OF TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

## INTRODUCTION.

This REVIEW presents a general summary of meteorological data collected by the Signal Service during the month of August, 1882.

One of the most noteworthy meteorological conditions observed, was the unusually high maximum temperatures which occurred in the northern plateau district, during the 7th, 8th, and 9th, when the temperatures were higher than have been recorded in that section of the country since the establishment of Signal Service stations. In the southern slope, a marked decrease in the mean temperature has occurred, with correspondingly low maximum temperatures. In the interior of the country, no unusually high temperatures have occurred, and the mean is generally below the average.

But few storms were reported during the month, none of which were particularly severe.

Heavy rains in various sections have caused damaging floods, the most serious being that which occurred in the vicinity of Fort Concho, Texas.

The severe drought which prevailed in New England during July, has continued during the present month. Drought has also prevailed during August in parts of Kansas and Nebraska.

The condition of the crops is generally reported to be favorable, although some damage has resulted from the heavy rains, which have checked, to some extent, harvesting operations.

The small number of reports that have been received from vessels encountering icebergs, indicate that the north Atlantic ocean is comparatively free of ice, and therefore the chart showing the limits of icebergs, which has accompanied previous REVIEWS, is not issued with the present number.

That part of the REVIEW referring to International Meteorology presents the general weather conditions which prevailed over the northern hemisphere during the month of June, 1880, the most marked feature being the low mean temperature, which was generally below the normal throughout central Europe. Heavy rains, causing floods and loss of life and property, occurred in parts of Germany and Austria. Chart v. exhibits the tracks of barometric minima for September, 1880, traced from simultaneous observations taken at 7:35 a. m., Washington mean time, and will be found interesting as

showing the tracks of four typhoons which occurred in the China sea during that month.

In the preparation of this REVIEW, the following data received up to September 20th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at one hundred and thirty-seven Signal Service stations and thirteen Canadian stations, as telegraphed to this office; one hundred and eighty-four monthly journals and one hundred and eighty-one monthly means from the former, and thirteen monthly means from the latter; one hundred and eighty-seven monthly registers from voluntary observers; fifty-four monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; Marine Reports through the co-operation of the New York Herald Weather Service; abstracts of Ships' Logs, furnished by the publishers of "The New York Maritime Register"; monthly reports from the local weather services of Kansas, Nebraska, and Missouri, and of the Central Pacific railway company; trustworthy newspaper extracts; special reports.

## BAROMETRIC PRESSURE.

[Readings expressed in inches and hundredths.]

The distribution of mean atmospheric pressure for the month of August, 1882, is shown by isobarometric lines, in black, on chart number ii. The area of lowest mean pressure occupies about the same position as that of the previous month, the isobar of 29.85, inclosing Arizona, and portions of California, Nevada, Utah and New Mexico. The lowest mean pressure for the month, (29.80) is reported from Fort Apache. From this region the pressure gradually increases, and is highest in the north Pacific coast region, Florida, and on the middle Atlantic coast; the highest monthly means reported, being 30.07 at Cedar Keys and 30.08 at Portland, Oregon. Compared with the previous month, the pressure ranges from 0.01 to 0.06 below at stations on the Pacific coast; from 0.04 below to 0.03 above in the plateau districts; from normal to 0.10 above on the eastern slope of the Rocky mountains; from 0.03 to 0.08 above in the extreme northwest; from 0.04 below to 0.04 above in the upper Mississippi and Missouri valleys; from 0.03 below to 0.06 above in the lake region; from 0.05 below to 0.01 above in the west Gulf states; from 0.01 to 0.05 below in the Ohio valley, Tennessee, the south Atlantic and east Gulf states; from 0.03 to 0.07 above in New England; from 0.03 below to 0.04 above in the middle Atlantic states; and from 0.01 to 0.04 below in Florida.

## DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

Compared with the August means of previous years the pressure is from normal to 0.05 above in New England and the middle Atlantic states; from 0.06 below to 0.05 above in the south Atlantic and east Gulf states; from normal to 0.03 below in the Ohio valley and Tennessee, except at Columbus where it is 0.02 above; from normal to 0.09 above in the extreme northwest, Missouri valley and west Gulf states; from 0.03 below to 0.03 above in the upper lake region and upper Mississippi valley; from 0.03 to 0.08 above on the Pacific coast; from 0.08 to 0.11 below in the middle slope and southern plateau; and from 0.02 above to 0.14 below in the middle plateau.

## BAROMETRIC RANGES.

The ranges of pressure during the month have varied from 0.18 to 0.80, the greatest range occurring at Albany, and the least at Campo, California. In the several districts the barometric ranges have been as follows:

*New England:* From 0.59 on the summit of Mount Washington to 0.81 at Burlington.

*Middle Atlantic states:* From 0.62 at Lynchburg to 0.80 at Albany.

*South Atlantic states:* From 0.35 at Jacksonville to 0.60 at Kittyhawk.

*Florida peninsula:* From 0.19 at Key West to 0.33 at Cedar Keys and Punta Rassa.

*East Gulf states:* From 0.35 at Mobile and Vicksburg to 0.40 at Montgomery.

*West Gulf states:* From 0.27 at Fredericksburg to 0.38 at Fort Smith and Little Rock.

*Rio Grande valley:* From 0.28 at Uvalde to 0.29 at Eagle Pass and Rio Grande.

*Ohio valley and Tennessee:* From 0.43 at Memphis to 0.65 at Pittsburg.

*Lower lake region:* From 0.58 at Toledo to 0.78 at Oswego.

*Upper lake region:* From 0.47 at Milwaukee to 0.61 at Port Huron.

*Extreme northwest:* From 0.65 at Moorhead to 0.73 at Saint Vincent.

*Upper Mississippi valley:* From 0.43 at Des Moines and Keokuk to 0.55 at Saint Paul.

*Missouri valley:* From 0.38 at Springfield to 0.68 at Fort Bennett.

*Northern slope:* From 0.41 at Cheyenne to 0.66 at Fort Benton.

*Middle slope:* From 0.35 at Fort Elliott to 0.54 at West Las Animas.

*Southern slope:* From 0.24 at Coleman City and Concho to 0.31 at Fort Sill.

*Southern plateau:* From 0.21 at Fort Apache to 0.36 at Tucson.

*Middle plateau:* From 0.26 at Pioche to 0.43 at Winnemucca.

*Northern plateau:* From 0.37 at Eagle Rock to 0.70 at Lewiston.

*North Pacific coast region:* From 0.43 at Roseburg to 0.51 at Olympia.

*Middle Pacific coast region:* From 0.31 at Cape Mendocino to 0.36 at Sacramento.

*South Pacific coast region:* From 0.18 at Campo to 0.39 at Yuma.

## AREAS OF HIGH PRESSURE.

During the month ten areas of high pressure have appeared within the limits of the map and are specially described below. Of these—one, number iii., appeared first on the south Atlantic coast and moved westward; three, numbers ii., v., and vi., entered the northern Pacific coast and cannot be traced further; four, numbers i., iv., vii., and ix., entered the United States in the northwest and moved across the country in a southeasterly direction; two, numbers viii., and ix., moved southerly from Canada, into the ocean, through the New England states.

I.—This is number v of the high areas described in the July REVIEW. The highest pressure recorded on the 1st, was 30.36 at Block Island, the area on that day moving into the Atlantic ocean.

II.—On the 2d, the pressure on the northern Pacific coast, rose about 0.2 above the normal, and remained high till the 6th, attended by partly cloudy weather and light rain. The highest recorded pressures were 30.19 at Olympia on the 3d, and 30.18 and 30.16 at Portland, Oregon, on the 4th and 5th respectively. This area seems not to have moved further into the country.

III.—On the 4th and 5th, the pressure rose in the south Atlantic states, and the high area moved westward on the 7th and 8th. The following high pressures were reported: 6th, Jacksonville, 30.21; 7th, Pensacola, 30.17; 8th, Palestine, 30.13. Fair weather and normal temperatures prevailed during the existence of this area.

IV.—This area entered the country from Manitoba on the 8th, and moved southeasterly; on the 10th, it prevailed in Iowa, Nebraska, Missouri and Kansas; on the 11th, it extended over the middle states and Ohio valley, and on the 12th, it reached the south Atlantic states, where it prevailed until the 16th. It was attended in its passage by a decided fall of temperature, ranging from 10° to 15° below the normal in the northwest to about 5° in the south Atlantic states. Rain was reported from the Atlantic and Gulf districts, being quite heavy at stations on the coast. [See under precipitation.] The high pressures reported, ranged from 30.26 at Fort Buford on the 8th to 30.13 at Jacksonville on the 16th.

V.—This area resembled number ii., the pressure rising on the northern Pacific coast during the 9th and 10th, reaching its maximum on the 11th at Portland, Oregon, where the recorded pressure was 30.34. The pressure fell again on the 12th, but the high area did not advance further into the country. Fair weather and normal temperatures attended this area.

VI.—On the 16th, the pressure again rose on the north Pacific coast, reaching 30.24 at Portland, Oregon, on the 17th and falling to the normal on the 18th. It was attended by fair weather and normal temperature.

VII.—This area entered the upper lake region on the 17th; its progress may be traced by the following maximum pressures: 18th, Marquette, 30.20; 19th, Parry Sound and Toronto, 30.22; 20th, Washington and Baltimore, 30.34; 21st, Baltimore and Albany, 30.36; 22d, Knoxville, 30.25; 23d, Augusta, 30.29; it moved off the south Atlantic coast on the 23d. The temperatures reported, ranged from 3° to 13° below the normal. Rain occurred in all the districts in the eastern part of the country, there being heavy rain-fall at a few stations on the coast.

VIII.—On the 25th, the pressure rose in lower Canada and the high area moved southeasterly over New England, on the 26th and 27th. The highest pressure noted was 30.25 at Chatham on the 27th. Partly cloudy weather and temperatures about 7° below the monthly normal prevailed in New England.

IX.—On the 27th, the pressure rose on the Pacific coast and the area moved in a direction indicated by the following maximum pressures: 28th, Olympia, 30.33; 29th, Fort Assinaboine, 30.36; 30th, Fort Benton, 30.35; 31st, Fort Buford, 30.32. The high area extended on these days in the northwest and at the close of the 31st, prevailed in the upper Mississippi valley. Its further course belongs to the September REVIEW. It was attended by a great fall of temperature in the extreme northwest, upper Mississippi and upper lake districts, with fair weather. The temperatures recorded in these districts were the lowest for the month, being from 10° to 20° below the normal.

X.—Simultaneously with the above, the pressure rose in the upper lake region; on the 28th and 29th the high area prevailed in New England and Canada; on the 30th, it extended over the middle Atlantic, and on the 31st, passed into the Atlantic. The highest pressures noted were: 29th, Chatham, 30.19; 30th, Baltimore and Philadelphia, 30.29; 31st, New York,

30.22. The area was accompanied by a fall of temperature, ranging from 1° to 7° below the monthly normal in the districts named; fair weather generally prevailed.

#### AREAS OF LOW PRESSURE.

During the month, the pressure has been constantly low in the middle and southern plateau regions as is indicated on chart number ii. In addition to this extended low area there have been ten distinct areas of low pressure whose centres have been sufficiently defined to allow the charting of their tracks. In no case, however, have these centres been characterized in their progress by severe storms, and it is therefore sufficient to briefly mention the characteristics of each and to refer to chart number i. for a representation of their courses.

The following table gives the number of areas of low pressure noted in the August WEATHER REVIEWS since 1873, and the average hourly velocity of the low centres in miles per hour:

Year.	No.	Hourly velocity.	Year.	No.	Hourly velocity.
1873	12	—	1878	14	26.8
1874	11	—	1879	11	21.0
1875	7	—	1880	16	25.9
1876	8	23.2	1881	6	25.4
1877	10	20.0	1882	10	19.0

The following table gives the latitude and longitude in which each area was first and last observed, and the average hourly velocity:

Areas of low barometer.	FIRST OBSERVED.		LAST OBSERVED.		Average velocity in miles per hour.
	Lat. N.	Long. W.	Lat. N.	Long. W.	
No. I.	41°	89°	40°	92°	8.4
II.	44	80	46	72	23.0
III.	44	80	50	67	31.7
IV.	50	97	47	86	34.0
V.	49	108	49	99	14.3
VI.	50	95	48	67	24.8
VII.	46	108	48	102	18.6
VIII.	48	105	47	100	8.2
IX.	40	86	39	83	5.5
X.	33	90	46	82	18.9
Mean hourly velocity.....					19.0

The small average hourly velocity is due to numbers i., viii., and ix., which are examples of low centres which were dissipated soon after formation. If these are neglected, the average hourly velocity becomes 23.6 miles. The average hourly velocity of the low centres in August for the years 1876-1881, given in the preceding table, is 23.7 miles. According to Professor Loomis, (American Journal of Science, vol. XIX, February, 1880,) the average velocity of barometric minima in this country, for the month of August, is 18.2, and for the year 26.0 miles per hour.

I.—This depression was formed in Illinois on the 2d, and began moving easterly, the lowest recorded pressure being 29.78 at Indianapolis on the 3d. The centre lost its definiteness on the 5th, with a rising pressure. This area was attended by abundant rains in the middle Atlantic, Ohio valley and lake districts.

II.—On the 7th, a marked depression was observed in lower Canada, with its centre beyond the limits of observation. The lowest recorded pressure was 29.58 at Quebec and Farther Point, and light rains were reported from Canada and northern New England. Following this, a depression was observed on the 8th, near Parry Sound and moved rapidly in a northeasterly direction, the lowest recorded pressure being 29.52 at Burlington and Montreal. It was accompanied by heavy rains in Canada and northern New England and brisk winds at the lower lake and New England stations.

III.—This depression followed ii., after two days and moved in a similar direction but with greater velocity. The lowest recorded pressure was 29.76 on the 11th, at Farther Point. Light rains and brisk to high winds were experienced on the 10th, in lower lake and New England districts.

IV.—This depression was observed in the northern limit of this country on the 10th and 11th, and was accompanied by light rains and brisk winds in the upper lake region. The lowest recorded pressure was 29.73 at Duluth.

V.—This depression was observed on the 11th, in the extreme northwest and moved southeasterly, with steadily decreasing pressure and accompanied by light rains, when it curved to the northeast and was apparently absorbed by low area vi., on the 14th, which, on that day, was entering the country from Manitoba. The lowest pressure was 29.54 at Fort Garry on the 13th.

VI.—This depression entered the country on the 14th, and moved rapidly on the northern portion of the lake region and through lower Canada, increasing in energy as it passed beyond the limits of the map. The lowest pressure on the 14th, was 29.65 at Saint Vincent, and on the 17th, 29.34 at Anticosti Island. Brisk winds and light rains accompanied its passage. This depression was the fourth in the period of one week which traversed the upper limit of the United States and whose effect was chiefly felt beyond the limits of the country.

VII.—This depression was developed on the 17th, in the vicinity of the military posts in the northwest, and moved, attended by high winds, in a northeasterly direction. Light rains fell in the upper lake region. The lowest recorded pressure was 29.67 at Fort Stevenson on the 18th.

VIII.—This depression formed during the 24th and 25th, in the northwest; it became defined on the 26th, and like v., moved southeasterly, curved to the northeast, and was probably absorbed by a low area then existing in Manitoba, which did not move into the limits of this country. It was attended by high winds in Minnesota, and light rains in the upper Mississippi valley and upper lake regions. The lowest recorded pressure was 29.64 at Fort Buford, on the 26th.

IX.—This depression formed in the Ohio valley on the 25th and 26th, and began to move easterly, when it became dissipated on the 28th without reaching the coast. It closely resembled low area i., and was accompanied by heavy rains in the Ohio valley and middle and southern states. The lowest recorded pressures were 29.83 at Louisville on the 26th, and at Columbus on the 27th.

X.—This depression was of slight energy, but it is interesting because the forerunner of storms which—in the autumn, traverse the eastern section of the country, moving in a north or northeasterly direction from the Gulf. The lowest recorded pressure was 29.88 at several stations in the western Gulf states and the depression diminished in energy as it moved toward the lakes, attended by light rains.

From the above brief description of the areas of low-pressure for the month, it will be seen that, while few of them deserve the name of storms, yet they represent several types of depressions which may be thus classified:

1. Depressions which travel eastward over the northern portion of the United States, and are sometimes storms of great violence. Of this class are numbers ii., iii., iv., and vi.

2. Depressions which form in the extreme northwest, and move easterly or northeasterly. Of this class are numbers v., vii., and viii. In all these cases the depressions passed out of the limits of observation soon after their formation.

3. Depressions which apparently form near the Mississippi valley, and move eastward. These frequently develop into storms of great energy. Of this class are numbers i., and ix., which illustrate also the formation of storms whose development is afterward checked, the depression ceasing to exist, and abundant rains being an attendant feature.

4. Depressions which enter the United States from the Gulf, and move in a northerly or northeasterly course. Of this class is number x., which was, however, without the violence which frequently accompanies storms of this class.

The following observations, recorded during a typhoon encountered by the s. s. "Coptic," Capt. W. H. Ridley, are furnished by the agents of the the Occidental and Oriental Steamship Company, of San Francisco:

Date.	Ship's position.	Hour of observation.	Barometer.	Wind direction.	Force.	Remarks.
1882. Aug. 4		Noon.	29.640	e.	7	Moderate gale; no observations.
4		2 p. m.		e.	7	Moderate gale; overcast and gloomy.
4		4 p. m.	29.550	e. by n.	8	Barometer falling; fresh gale.
4		6 p. m.		ene.	8	Wind backing.
4	N. 32° 41', E. 134° 40'	8 p. m.	29.550	ene.	8	Shipping heavy water.
4		10 p. m.		ene.	6	Fresh gale and high sea.
4		Midnight.	29.550	ene.	8	Fresh gale and squally.
5		2 a. m.	29.530	ene.	9	Strong gale.
5		4 a. m.	29.475	ene.	10	Whole gale; heavy sea.
5		6 a. m.	29.300	e.	10	Put ship's head to se. by s. on port tack.
5		8 a. m.	29.345	e.	10	Terrific squalls accompanied by heavy rain.
5		10 a. m.	29.300	e.	10	Wind veering.
5		Noon.	29.120	e. by s.	11	Wind increasing and sea rising; confused.
5		2 p. m.	29.180	ese.	12	Wind, typhoon force.
5		4 p. m.	29.280	se. by s.	12	High confused sea; wind typhoon force.
5		6 p. m.	29.400	sse	11	Less wind.
5	About N. 32° 56', E. 136° 48'	8 p. m.	29.665	s.	10	Whole gale and high sea.
5		10 p. m.	29.710	s.	8	Moderating fast.
5		Midnight.	29.755	s.	6	Reduced to strong breeze and overcast.
6		2 a. m.	29.755	s.	4	Haul-d-up ene. to e.
6		4 a. m.	29.760	s.	4	Wind and sea moderating; clouds breaking.
6		6 a. m.		s.	3	Squally with heavy rain.
6		8 a. m.	29.860	s.	3	Thick hazy weather and squally.
6		10 a. m.		s.	3	Thick weather.
6		Noon.	29.945	s.	3	Same weather.
6		2 p. m.		s.	3	Same weather.

Remainder of the passage had light variable winds, and overcast, misty weather. Arrived at Yokohama at noon of the 7th.

In connection with the above typhoon, the U. S. S. "Palos," at Kobe, Japan, reports as follows:

"During the morning and forenoon of August 4th, weather clear and pleasant, wind varying from e. by n. to ese., until about 11:00 a. m., when squalls of wind and rain began to pass over from the eastward; barometer falling slowly from 29.86 at 8:00 a. m. to 29.84 at noon, after which time, weather cloudy, with rain, moderate to fresh breezes from the east; barometer fell irregularly from 29.84 to 29.79 at 4:00 p. m. From 4:00 p. m. to midnight, weather cloudy, with light drizzling rain, fresh breezes in quick squalls from e. and e. by n.; barometer falling steadily to 29.69 at midnight. From midnight to 4:00 a. m. of the 5th, weather overcast and cloudy, wind in heavy squalls from the e.; barometer falling irregularly to 29.60 at 4 o'clock. From 4:00 to 8:00 a. m., overcast and cloudy, occasional breaks in the clouds showing blue sky and an upper stratum of cirro-cumulus clouds nearly stationary, the lower strata, throughout the gale, were composed of dark cumulus and nimbus clouds traveling with the wind. Barometer 29.53 at 8:00 a. m., wind in squalls from the e., force 6 to 8. From 8:00 a. m. to meridian, weather cloudy, with light drizzle occasionally; moderate to strong gale from e. and e. by n. in squalls; heavy rain-clouds to the southward, making toward the east; moderate sea, ship rolling easily and pitching occasionally; a brig, farther out in the harbor, dragging with two anchors down; barometer falling rapidly to 29.38 at noon. From meridian to 8:00 p. m., weather overcast and cloudy, with drizzling rain; wind blowing moderate to strong gale, increasing at 4:00 p. m.; barometer 29.24; heavy sea, ship rolling and pitching heavily. At about 5:45 p. m., barometer began to rise; lowest reading 29.24; moderate to strong gale in squalls; at 5:45 p. m., wind suddenly shifted to s. by e. in a heavy squall, blowing a gale for a few minutes, when it suddenly backed to se. and blew as hard for a short time. At 6:00 p. m., barometer 29.30; wind gradually decreasing; from 7:00 to 8:00 p. m., fresh breeze to moderate gale; barometer at 8:00 p. m., 29.43; heavy sea from the southeast, breaking along the whole length of the Bund, half as high as the houses on the opposite side. From 8:00 p. m. to midnight, overcast and cloudy, with rain; mod-

erate to fresh breeze from se. during the first two hours, decreasing to light breeze and hauling to e.; barometer rising; at midnight, 29.59."

### INTERNATIONAL METEOROLOGY.

International charts iv. and v. accompany the present number of this REVIEW. Chart iv. is published for June, 1880, and continues the series of that chart begun in January, 1877. Chart v. is prepared for September, 1880, and continues the series of that chart from November, 1877. In the description of these charts, much valuable information has been obtained from the "Monatliche Uebersicht der Witterung," published by Professor Dr. G. Neumayer, Director of the German Marine Observatory at Hamburg, and from the "Bulletin Mensuel," published by Mr. Marc Dechrevens, of Zi-Ka-Wei, China.

Chart iv. exhibits the mean pressure, mean temperature, and the prevailing direction of the wind over the northern hemisphere for the month of June, 1880, as determined from one observation taken each day at 7.35 a. m., or 0.43 p. m. Greenwich mean time. The area of lowest mean pressure, 29.40 (746.7), occupies part of British India, where the lowest mean pressure was 29.35 (745.5) at Lahore.

The isobar of 29.6 (751.8) covers that part of Asia lying between the sixtieth and one-hundredth meridians, and between 20° and 40° north latitude, excepting the province above mentioned.

The isobar of 29.7 (754.4) occupies the region between the fortieth and fiftieth parallels, and extends from the interior of China to the eastern shores of the Caspian Sea.

The isobarometric line of 29.8 (756.9) covers the eastern part of China and the whole of Siberia.

In Europe the isobar of 29.8 (756.9) includes within its limits Russia, Austria, Sweden and Norway, Denmark and northern Germany.

Two areas of barometric maxima appear on the chart, one of which occupies the Atlantic ocean from N. 20° to N. 45°, and from the coasts of Portugal and Morocco westward to the forty-fifth meridian, the region of highest mean pressure, 30.3 (769.6), being over the Azores. The other, 30.1 (764.5), covers that portion of the ocean between the West Indies and the sixty-fourth meridian.

In the United States, the area of highest mean pressure occupies Florida, Alabama and Georgia, while the isobar of 30.0 (762.0) covers the north Pacific coast. In British America, the isobar of 30.0 (762.0) extends over Canada and Hudson's Bay.

Compared with the preceding month (May), but slight changes have occurred in the distribution of atmospheric pressure. In the United States, the pressure has decreased in the north Pacific coast region; it has also decreased slightly over the Atlantic coast, between 35° and 40° north latitude; over the interior of the country, the pressure shows no material change. In Canada, there was a slight decrease.

In Europe, the pressure has decreased over the entire continent, except in the southern peninsulas and in France, where there has been a slight increase. In Greenland, the pressure has increased; the mean barometer at Godthaab being about 0.15 inch above the mean for May. In Iceland, the mean pressure was slightly below that of the preceding month.

In Asia, the mean barometric pressure has averaged about 0.20 inch below the mean for May, in Hindostan; and about 0.10 inch below in China, Japan and Siberia.

Compared with the corresponding month of previous years, the pressure was slightly above the normal in that part of the United States lying east of the ninety-second meridian, except in New England, where it was about 0.03 inch below; west of the above-mentioned meridian, the pressure ranged from 0.03 to 0.05 inch below the normal. In Canada, the mean pressure was slightly above the average, except in the eastern part of Nova Scotia.

The following table exhibits the mean pressure and mean temperature for the month of June, 1880, in the several countries of Europe and Asia, as determined from observations taken during June in the years 1877, 1878 and 1879: